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**REMARKS**

Upon entry of this amendment, Claims 1-18 are pending in the present application. The specification has been amended to correct typographical errors. Basis for this amendment may be found in Claim 11 as originally filed. Claim 10 has been cancelled without prejudice. Claims 1 and 11 have been amended to incorporate the subject matter of cancelled Claim 10. Claims 2, 3, 8, and 15 have been amended to correct typographical spelling errors. No additional claim fees are believed to be due. It is believed these changes do not involve any introduction of new matter. Consequently, entry of these changes is believed to be in order and is respectfully requested.

**INVENTION SYNOPSIS**

The present invention is directed to a laminate comprising at least one anaerobically degradable layer, wherein the anaerobically degradable layer is resistant to mold growth and has (a) an increase in basis weight of at least about 10%; and (b) a decrease in tensile elongation of at least about 30% after being immersed in an active anaerobic sludge medium for 28 days. In preferred embodiments, the laminate comprises an anaerobically responsive polymer and at least 0.1 wt% of an inorganic salt dispersed therein. These anaerobically degradable layers are melt processible fibers, films, or laminates, and are suitable for use in an absorbent article, particularly flushable interlabial devices, tampons, and pantliners.

These anaerobically degradable layers may be used alone or in blends with other polymers, such as water-responsive polymers. The anaerobically degradable layer or blends thereof may be used as fibers, films, laminates, nonwoven webs, or shaped articles, and may be incorporated into absorbent articles, such as topsheets, backsheets, outer covers, secondary layers, applicator assemblies, and wrappings.

**REJECTION UNDER 35 USC § 112, SECOND PARAGRAPH**

Claims 1-16 stand rejected under 35 USC § 112, 2<sup>nd</sup> paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The Office contends that claims setting forth merely the desired characteristics are invalid as vague, indefinite, and functional as they cover any combination of ingredients. The

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Office also contends that the current claims are too broad and indefinite because they recite compounds by their desired function rather than by their composition. Furthermore, the Office asserts that the expressions are too broad, as they appear to read upon materials that could not be used to accomplish the Applicant's intended purpose. Applicants respectfully traverse this rejection.

Applicants respectfully submit that Claims 1-16 are definite as they particularly point out and distinctly claim the subject matter which is regarded as the invention. In every instance, "[a] decision of whether a claim is invalid [for indefiniteness] requires a determination of whether those skilled in the art would understand what is claimed when the claim is read in light of the specification." Rhone-Poulenc Agrochimies S.A. v. Biagro Western Sales, Inc., 35 U.S.P.Q.2d 1203, 1205 (Cal. 1994). In this instance, the specification provides the necessary information for one skilled in the art to understand the breadth of the claimed invention. For instance, the claimed laminate is defined by the characteristics of its anaerobically biodegradable layer. Moreover, relative to the dependent claims, the specification provides the categories from which the esters and amides are chosen. Preferences are also listed for particular combinations of polyesteramides, the melting point range, molecular weights, and so forth. See, page 4, lines 7-26 of the specification. Since the specification is not addressed to lawyers or even to the public generally, but to those of ordinary skill in the art, any description that is sufficient to apprise them (in the language of the art) of the definite features of the invention, and to serve as a warning to others of that which is claimed, is sufficiently definite. See, The Carnegie Steel Co., Ltd. v. The Cambria Iron Co., 185 U.S. 403 (1866). Applicants provide test methods, examples, and material composition characteristics within the specifications which would enable one skilled in the art to understand the claimed subject matter. See, pages 11-16. Therefore, it is quite clear to a skilled artisan the intended claimed subject matter of the present invention. Applicants, therefore, respectfully request reconsideration and withdrawal of the rejection under § 112, 2<sup>nd</sup> paragraph.

#### REJECTIONS UNDER 35 USC § 102(b)

Claims 1-7 and 9-10 stand rejected under 35 USC § 102(b) as being anticipated by Timmermann et al. (US Patent 5,644,020) (hereafter "Timmermann"). The Office contends that

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Timmermann discloses a polyesteramide which is biodegradable, has a melting point of greater than 75°C, may be formed into laminates, and may contain organic or inorganic fillers in an amount of 0-50 wt%. Furthermore, the Office contends that while Timmermann does not disclose the claimed properties of an increase in basis weight of at least about 10% and a decrease in tensile elongation of at least about 30% after being immersed in an active anaerobic sludge medium for 28 days, presumably the material Timmermann does disclose would inherently possess these same claimed properties. Applicants respectfully traverse this rejection.

Timmermann relates to thermoplastically processible aliphatic polyesteramides that are biodegradable (compostable). In particular, Timmermann discloses a biodegradable polyesteramide containing amide structures in 30-70 wt% and ester structures in 30-70 wt%; the melting point is at least 75°C; and the polyesteramide may comprise organic or inorganic fillers in an amount of 0-50 wt%.

Applicants respectfully submit that despite its disclosure, Timmermann does not anticipate the claims of the present invention. Timmermann fails to teach or suggest each and every element set out in Applicants' claims and therefore does not anticipate the claimed invention. First, Timmermann teaches away from the Applicants' claimed invention. Applicants claim a laminate comprising at least one anaerobically degradable layer. Timmermann, however, specifically teaches the introduction of air via its examples. See, col. 5, line 9. This technique differs from Applicants' invention, which utilizes an anaerobic system for the degradation of the laminates. Second, Timmermann teaches a biomass growth on the disclosed polymers in the amount of at least 30 mg/l within two weeks. See, col. 4, lines 4-5. One skilled in the art would recognize that the term "biomass" indicates bacterial and mold growth. Therefore, Timmermann teaches away from the present invention, which includes an anaerobically degradable layer which is resistant to mold growth. Furthermore, Applicants surprisingly found that the accumulation of calcium carbonate as well as a relatively low water activity in the presently claimed invention contributes to the prevention of biomass growth. For instance, Applicants disclose in Test Method Number 3, a test for mold growth in which no growth was visible after two weeks. See, page 13, lines 5-9.

Based on these shortcomings and adverse teachings, Applicants respectfully submit that the present invention is not anticipated by Timmermann under 35 USC § 102(b).

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Reconsideration and withdrawal of the rejection is therefore requested.

Claims 11-14 and 17 stand rejected under 35 USC § 102(b) as being anticipated by Lorcks et al. (US Patent 6,096,809) (hereafter "Lorcks"). The Office contends that Lorcks relates to a biologically degradable polymer mixture containing at least one starch biopolymer made from renewable raw materials, a plasticizer, and a polymer selected from the following materials: an aromatic polyester; a polyester-copolymer with both aliphatic and aromatic blocks; a polyesteramide; a polyglycol; a polyester urethane; and/or mixtures of these components. The invention disclosed by Lorcks contains a mixture of 80-40 wt% of thermoplastically processible polyesteramides comprising 30-70 wt% aliphatic esters and 70-30 wt% aliphatic amide structures, where preferably 10-90 wt%, in particular 20-60 wt%, starch or thermoplastic starch are contained. The Office relies on the contention that thermoplastic starch is the equivalent of a water-responsive polymer. The Office also contends that although Lorcks does not disclose that the mixture has the claimed properties, since Lorcks discloses the same materials, presumably they would inherently possess the same claimed properties. Applicants respectfully traverse this rejection.

Applicants respectfully submit that despite its disclosures, Lorcks does not anticipate the present invention. Lorcks fails to teach or suggest each and every element set out in the Applicants' claims. Lorcks teaches away from the Applicants' invention with the inclusion of starch in the polymer mixture. See, col. 3, lines 58-63. Since this use of starch would induce a biomass growth on the laminate, such a disclosure is in stark contrast to Applicants' invention, which includes a layer that is resistant to mold growth.

Based on these shortcomings and adverse teaching, Applicants respectfully submit that the present invention is not anticipated by Lorcks under 35 USC § 102(b). Reconsideration and withdrawal of the rejection is therefore requested.

#### REJECTIONS UNDER 35 USC § 103(a)

Claims 1-7 and 9-10 stand rejected under 35 USC § 103(a) as being unpatentable over Timmermann. In support of this rejection, the Office reasons that Timmermann discloses the same material as claimed by Applicants and while Timmermann does not disclose the same claimed properties of the materials claimed, presumably the materials disclosed by Timmermann

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would inherently possess the same claimed properties. Applicants respectfully traverse this rejection.

Applicants submit that the present invention is not rendered obvious over Timmermann. First, Timmermann does not teach or suggest a laminate comprising an anaerobically biodegradable layer. Rather, the reference teaches away from such since in its examples air is introduced when testing for biodegradability. See, col. 5, line 9. Second, Timmermann teaches a biomass growth on the polymers in the amount of at least 30 mg/l within two weeks. See, col. 4, lines 4-5. As discussed earlier, one skilled in the art would recognize that the term "biomass" indicates bacterial and mold growth. Therefore, it is clear that Timmermann teaches away from the present invention which includes an anaerobically degradable layer which is resistant to mold growth. Furthermore, Applicants have found that the relatively low water activity and the surprising accumulation of calcium carbonate in the presently claimed invention results in a prevention of biomass growth. See, page 14, lines 15-23. For example, Applicants disclose in Test Method Number 3, a test for mold growth in which no growth was visible after two weeks. See, page 13, lines 5-9.

Summarily, the Timmermann reference fails to teach or suggest each and every limitation set forth in Applicants' invention. Therefore, it is respectfully submitted that rejection of Applicants' Claims 1-7 and 9-10 as obvious over Timmermann is improper. Reconsideration and withdrawal of the rejection is therefore requested.

Claim 8 stands rejected under 35 USC § 103(a) as being obvious over Timmermann and further in view of Warzelhan et al (US Patent 6,353, 084) (hereafter "Warzelhan"). In support of this rejection, the Office contends that Timmerman teaches all of the limitations of the claims even though the reference does not specifically list possible incorporating fillers. Applicants respectfully traverse this rejection.

Applicants submit that Claim 8 is not rendered obvious over Timmermann in view of Warzelhan. Timmermann is discussed above while Warzelhan relates to biodegradable polyesteramides as defined by reacting a mixture consisting essentially of (a1) a mixture consisting essentially of 35 to 95 mol% of adipic acid or ester-forming derivatives thereof, 5 to 65 mol% of terephthalic acid or ester-forming derivatives thereof, and 0 to 5 mol% of a compound containing sulfonate groups, (a2) a mixture consisting essentially of 95.5 to 0.5 mol%

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of a dihydroxy compound, 0.5 to 99.5 mol% of an amino-C<sub>2</sub>-C<sub>12</sub>-alkanol or an amino-C<sub>5</sub>-C<sub>10</sub>-cycloalkanol, 0 to 50 mol% of a diamino-C<sub>1</sub>-C<sub>8</sub>-alkane, and 0 to 50 mol% of a 2,2'-bisoxazoline, and (a3) 0 to 5 mol% based on (a1) of a compound D. The Warzelhan patent also relates to other biodegradable polymers and thermoplastic molding compositions, their manufacture, and their use for producing biodegradable moldings, adhesives, foams, and coatings. Conventionally, these polymers are used for coating substrates. Furthermore, the polymers may also be spun into threads and fibers. The Warzelhan reference does not teach or suggest a laminate comprising at least one anaerobically degradable layer, wherein the anaerobically degradable layer is resistant to mold growth and has (a) an increase in basis weight of at least about 10%; and (b) a decrease in tensile elongation of at least about 30% after being immersed in an active anaerobic sludge medium for 28 days.

Assuming arguendo, the Warzelhan patent does not correct the deficiencies of the Timmermann patent rendering Applicants' invention obvious in view of these two patents. The Office attempts to combine the fillers disclosed in the Warzelhan patent with the Timmermann patent in its entirety. Even if the two patents are combined, the Timmermann patent still teaches away from Applicants' invention since it teaches the introduction of air when assessing degradability as well as a production of biomass growth. The Warzelhan reference does not change either of these aspects of the Timmermann patent. Therefore, the introduction of air and the biomass growth will still exist in any attempt to combine the Timmermann and Warzelhan references. Summarily, as the limitations of an anaerobically biodegradable layer and resistance to mold growth cannot be produced by a combination of the two references, a skilled artisan would certainly not have been led to arrive at the present invention by exposure to the two references.

Claims 11-14 and 17 stand rejected under 35 USC § 103(b) as being obvious over Lorcks. In support of this rejection, the Office states that Lorcks discloses the same materials to be used in a biodegradable polymer mixture as what the Applicant's use in the present invention. The Office further contends that although Lorcks does not disclose the same properties as those claimed by the Applicants, since the materials are the same, presumably they would inherently possess the same characteristics. Applicants traverse this rejection.

Lorcks is described above and Applicants submit that Lorcks fails to render the



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Applicants' invention obvious. Lorcks discloses the use of starch in the polymer mixture. See, col. 3, lines 58-63. One skilled in the art would clearly recognize that the inclusion of starch would result in bacterial and mold growth on the laminate. Therefore, this obviously teaches away from the present invention, which is resistant to mold growth. Summarily, as the limitations of the Applicants' claimed invention are not taught or suggested by the Lorcks reference, a skilled artisan certainly would not have been led to the Applicants' claimed invention simply by a reading of the Lorcks reference. Reconsideration and withdrawal of this rejection is respectfully requested.

Claim 18 stands rejected under 35 USC § 103(a) as being unpatentable over Lorcks in view of Keyes et al (US Patent 4,830,187) (hereafter "Keyes"). In support of this rejection, the Office states that Lorcks discloses the material and Keyes discloses how that material may be formed into a portion of a tampon. Applicants respectfully traverse this rejection.

Lorcks and its deficiencies have already been discussed above. Keyes relates to flexible, soft objects such as ostomy pouches, wound dressings, bandages, diapers etc. that can be flushed down a conventional toilet by covering the article with a sheet of material that rapidly become slimy or exudes a slimy material on contact with the water in a toilet bowl or by adding the materials directly to the bowl. Although Keyes suggests that this method of disposal may be useful for tampons, Keyes does not teach or suggest how this method maybe useful for tampons. As with Lorcks, Keyes also does not teach or suggest a laminate that comprises an anaerobically biodegradable layer. Since this limitation as set forth by Applicants' is not taught or suggested by Keyes, it does not correct the failed teaching by Lorcks of a laminate that includes an anaerobically biodegradable layer among other things. Thus, it would be incorrect to combine Lorcks and Keyes to claim Applicants' invention is obvious.

In summary, since Keyes fails to teach or suggest the limitations set forth in Applicants' invention, Applicants submit that this rejection under § 103(a) is improper. Therefore, it is respectfully submitted that Claim 18 be reconsidered and the rejection withdrawn.

Claims 15-16 stand rejected under 35 USC § 103(a) as being unpatentable over Lorcks in view of Warzelhan. The Office asserts that while Lorcks discloses all aspects of the polymer mixture except for the fillers, Warzelhan provides the listing of fillers. The Office contends it would have been obvious for one of ordinary skill in the art to employ the fillers disclosed by

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Warzelhan in the mixture disclosed by Lorcks. Applicants traverse this rejection.

Assuming *arguendo*, Warzelhan does not correct the deficiencies of the Lorcks patent such that the combination of the two patents renders the present invention obvious. The Office seeks to combine the disclosure of the fillers listed in the Warzelhan patent with the whole disclosure of the Lorcks patent. Even if the respective disclosures of the two patents were combined, Lorcks still teaches away from the Applicant's invention. Lorcks teaches the introduction of starch into the polymer and laminate which in turn produces bacteria and mold growth. The Warzelhan patent does not change either of these two aspects taught by Lorcks. Therefore, the combination of the two references would still yield bacteria and mold growth as a result of the starch presence. Thus, the combination of the two references does not render obvious the claimed invention.

It is well settled that the Office cannot pick and choose among individual elements of assorted prior art references to recreate the claimed invention based on the hindsight of the Applicant's invention. Rather, the Office has the burden to show some teaching or suggestion in the references to support their use in the particular claimed combination. See SmithKline Diagnostics, Inc. v. Helena Lab. Corp., 8 U.S.P.Q.2d 1468, 1475 (Fed. Cir. 1985). Here, there is no such teaching or suggesting. Additionally, the mere fact that it is possible to find isolated disclosures which might be combined in such a way as to produce a new composition does not necessarily render such production obvious unless the art also contains something to suggest the desirability of the proposed combination. In re Grabiak, 222 U.S.P.Q.2d 870, 872 (Fed. Cir. 1985). Furthermore, "obvious to try" is not a valid test of patentability. In re Dow Chemical Co., 5 U.S.P.Q.2d 1529 (Fed. Cir. 1988); In re Antoine, 195 U.S.P.Q. 6 (CCPA 1977). There must be a suggestion or teaching that the claimed novel form could or should be prepared. In re Cofer, 148 U.S.P.Q. 268 (CCPA 1966). Moreover, it is well settled that obviousness cannot be established by a combination of references where one of the references teaches away from the claimed invention. In re Grasselli, 281 U.S.P.Q. 769, 780 (Fed. Cir. 1983). Thus, it is clearly the case that the present invention could not have been rendered obvious by Timmerman or Lorcks' disclosures since they both teach away from the subject matter which is currently claimed even when combined with the disclosures of either Warzelhan or Keyes.



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**CONCLUSION**

Based on the foregoing reasons, Applicants respectfully submit that the Office has not made prima facie case of obviousness and anticipation and the rejections are therefore improper. Reconsideration and withdrawal of the rejections is respectfully requested. Allowance of each of the pending claims in the next Office Action is earnestly requested.

Respectfully Submitted,

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